CLAIMS:

1. An optical transmission apparatus for amplifying wavelength-division multiplexed light received from a first optical transmission line and supplying it to a second optical transmission line, comprising:

an optical amplifier for amplifying said wavelength-division multiplexed light;

a first chromatic dispersion compensator for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light from a first predetermined position on said first optical transmission line to said optical transmission apparatus; and

a second chromatic dispersion compensator for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light between said optical transmission apparatus and a second predetermined position on said second optical transmission line.

2. An optical transmission apparatus according to claim 1, further comprising an add drop portion between said first and second chromatic dispersion compensators, said add drop portion having wavelength-dropping means for dropping an optical signal of a predetermined band from said wavelength-division multiplexed light, and wavelength-adding means for multiplexing an optical signal of a certain band with

said wavelength-division multiplexed light.

3. An optical transmission apparatus according to claim 2, wherein said add drop portion is constructed to be detachable.

4. An optical transmission apparatus according to claim 1, wherein said optical amplifier includes a first optical amplifier provided between said first optical transmission line and said first chromatic dispersion compensator, and a second optical amplifier provided between said second chromatic dispersion compensator and said second optical transmission line.

5. An optical transmission apparatus for amplifying wavelength-division multiplexed light received from a first optical transmission line and supplying it to a second optical transmission line, comprising:

an optical amplifier for amplifying said wavelength-division multiplexed light received from said first optical transmission line;

a first chromatic dispersion compensator for compensating for chromatic dispersion caused during the time in which said wavelength-division multiplexed light produced from said optical amplifier is transmitted from a first predetermined position on said first optical transmission line to said optical transmission apparatus;

an add drop portion including wavelength-dropping means for dropping an optical signal of a

predetermined band from said wavelength-division multiplexed signal produced from said first chromatic dispersion compensator, and wavelength-adding means for multiplexing an optical signal of a certain band with said wavelength-division multiplexed light from which said optical signal of said predetermined band has been dropped; and

a second chromatic dispersion compensator for compensating for chromatic dispersion caused during the time in which said wavelength-division multiplexed light produced from said add drop portion is transmitted between said optical transmission apparatus and a second predetermined position on said second optical transmission line.

6. An optical transmission apparatus according to claim 5, wherein said optical amplifier includes a gain tilt compensator for compensating for the gain tilt between the wavelengths of the output signal from said optical amplifier.

7. An optical transmission apparatus according to claim 6, wherein said optical amplifier further includes means for detecting the optical power of the wavelength-division multiplexed light fed to said optical amplifier so that said gain tilt compensator mounted on said optical amplifier can be controlled by using pre-stored gain tilt characteristics with respect to the input optical power to said amplifier.

8. An optical transmission apparatus according

to claim 6, wherein said optical amplifier includes means for extracting wavelength multiplex number information of said wavelength-division multiplexed light from an optical supervisory channel signal included in said wavelength-division multiplexed light, and said add drop means includes means for detecting the optical power of the input wavelength-division multiplexed light, and means for detecting the optical power of said dropped signal, whereby said gain tilt compensator provided in said optical amplifier is controlled to estimate the gain tilt between the wavelengths of the wavelength-division multiplexed light fed to said add drop portion by using said extracted wavelength multiplex number information, said detected optical power of said wavelength-division multiplexed light and the optical power of said dropped signal, and to compensate for said gain tilt.

9. An optical transmission apparatus according to claim 5, wherein said add drop portion includes a gain tilt compensator for compensating for the gain tilt between the wavelengths of the input signal to said add drop portion.

10. An optical transmission apparatus according to claim 9, wherein said optical amplifier includes means for detecting the optical power of the wavelength-division multiplexed light fed to said optical amplifier so that said gain tilt compensator mounted in said add drop portion can be controlled by

using pre-stored gain tilt characteristics with respect to the input optical power to said optical amplifier.

11. An optical transmission apparatus according to claim 9, wherein said optical amplifier includes means for extracting the wavelength multiplex number information from an optical supervisory channel signal included in said wavelength-division multiplexed light, and said add drop portion includes means for detecting the optical power of the input wavelength-division multiplexed light, and means for detecting the optical power of said dropped signal so that said gain tilt compensator mounted in said add drop portion can be controlled to estimate the gain tilt between the wavelengths of the wavelength-division multiplexed light fed to said add drop portion by using the extracted wavelength multiplex number information, the detected optical power of said wavelength-division multiplexed light and the optical power of said dropped signal, and to compensate for said gain tilt.

12. A chromatic dispersion compensating method for receiving wavelength-division multiplexed light from a first optical transmission line and supplying the received light to a second optical transmission line, said method comprising the steps of:

amplifying said wavelength-division multiplexed light received from said first optical transmission line;

compensating for chromatic dispersion caused

during the time in which said amplified wavelength-division multiplexed light is transmitted from a first predetermined position on said first optical transmission line until said light is received as defined above;

dropping an optical signal of a predetermined band from said dispersion-compensated wavelength-division multiplexed light;

multiplexing an optical signal of a particular band with said wavelength-division multiplexed light from which said optical signal of said predetermined band has been dropped; and

previously compensating for chromatic dispersion caused during the time in which said wavelength-division multiplexed light with which said optical signal of said certain band has been multiplexed is transmitted up to a second position on said second optical transmission line.